WHAT IS CLAIMED IS:

- 1. A laser beam projector comprising:
- an optical head of projecting a laser beam; and
- a holding-turning mechanism of holding and turning the optical head.
- 2. The laser beam projector according to claim 1, wherein the holding-turning mechanism holds the optical head so that the optical head is able to turn about an axis passing a center of gravity of the optical head.
- 3. The laser beam projector according to claim 1, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.
- 4. The laser beam projector according to claim 2, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.
- 5. The laser beam projector according to claim 1, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 6. The laser beam projector according to claim 2, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 7. The laser beam projector according to claim 3, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 8. The laser beam projector according to claim 4, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.

- 9. The laser beam projector according to claim 1, wherein the optical head emits a YAG laser beam.
 - 10. A robot comprising:
 - an robot arm; and
- a laser beam projector attached to the robot arm, the laser beam projector including an optical head of projecting a laser beam and a holding-turning mechanism of holding and turning the optical head.
- 11. The robot according to claim 10, wherein the holding-turning mechanism holds the optical head so that the optical head is able to turn about an axis passing a center of gravity of the optical head.
- 12. The robot according to claim 10, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.
- 13. The robot according to claim 11, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.
- 14. The robot according to claim 10, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 15. The robot according to claim 11, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 16. The robot according to claim 12, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.
- 17. The robot according to claim 13, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order

to turn the optical head.

18. The robot according to claim 10, wherein the optical head emits a YAG laser beam.